REMARKS

This is intended as a full and complete response to the Office Action dated January 11, 2005 (hereinafter "the Office Action") having a shortened statutory period for response set to expire on April 11, 2005.

In the Office Action, claims 1-8, 10-17, 19, 20, and 22-41 were rejected, and claims 9, 18, 21, and 32 were objected to. With entry of this amendment, claims 1, 28, 31, 32, 34, 36, and 38 have been amended. Accordingly, claims 1-41 are presently pending.

Claim 32 was objected to in the Office Action because of the informality of proper claim dependency. Claim 32 has been amended to overcome this objection.

Claims 1-8, 10-17, 19, 20, and 22-41 were rejected under 35 U.S.C. § 102(b) as being anticipated by Reblewski et al. (U.S. Pat. No. 6,265,894 B1; hereinafter "Reblewski"). With these rejections Applicants respectfully disagree at least for the below set forth reasons.

Interconnect network 104 of Figures 1, 4, and 11 of Reblewski is not dynamically reconfigurable (Note in Fig 11 block 137 is the dynamically reconfigurable network not crossbar network 104). Reblewski discloses logic elements ("LEs") forming a crossbar network 104. See Reblewski at column 3, lines 53-61. Additionally, in Reblewski it is stated that a network 137 is dynamically reconfigurable such that "...emulation need not be restarted from the beginning of the emulation." See Reblewski at column 4, lines 16-22. Reblewski specifically points out that "...dynamically reconfigurable network 137 does not require recompilation, while reconfiguration of the interconnect network 104 does require recompilation..." See Reblewski, at column 4, lines 22-25. Thus, it should be appreciated that Reblewski does not describe, show, or suggest dynamic reconfiguration of crossbar network 104.

Furthermore, it may be argued that Reblewski teaches away from dynamic reconfiguration of interconnect network 104 by providing "...overlapping coverage of the LEs..." to "...provide increased flexibility of signal routing for mapping circuit designs." See Reblewski at column 6, lines 63-65. Moreover, Reblewski uses an "...inter-reconfigurable circuit crossbar network stage 114a-114b for interconnecting the reconfigurable circuit to other reconfigurable circuits and a 'host' computer... ."

See Reblewski at column 7, lines 7-11. Reblewski uses "... inter-reconfigurable circuits crossbar network stage 0 114a-114b ... for coupling 64 I/O signals of the reconfigurable circuit to the next stage of a Claus network for interconnecting the reconfigurable circuit to other reconfigurable circuits and a 'host' computer." See Reblewski at column 7, lines 11-18.

Thus, it should first be understood that Reblewski provides "overlapping coverage" in order to avoid having to reconfigure crossbar network 104. In other words, Reblewski uses more circuits to avoid having to do a complete recompilation, as crossbar network 104 is not dynamically reconfigurable. Secondly, it should be understood that Reblewski, to avoid reconfiguration of crossbar network 104 for coupling circuits thereto, provides an inter-reconfigurable circuit crossbar network stage to crossbar network 104.

Amended claims 1, as well as originally presented claim 22, are easily contrasted with Reblewski, which does not describe, show, or suggest either dynamic reconfiguration or partial reconfiguration of a crossbar network. Claim 1, as amended, recites in relevant part that:

> "...the inputs and the outputs are selectable via reconfiguration while concurrently operating at least part of the multi-stage crossbar switch for responsive path configuration to provide input-to-output cross-connectivity via the first stage, the second stage and the third stage using the first interconnects and the second interconnects."

Claim 22 recites in relevant part that:

> "...partially reconfiguring at least one of the first, second and third stage of crossbars to provide an input-to-output cross-connection from input of the first portion of the configurable logic to output of the third portion of the configurable logic via the first, second and third portion of configurable logic."

Support for dynamic and partial reconfiguration may be found in the Specification of the above-captioned application. To expedite prosecution, support may be particularly found at Paragraph [0056], though additional support exists in the Specification including without limitation in Paragraph [0057].

Amended claims 28, 31, 34, 36, and 38, are easily contrasted with Reblewski, as Reblewski does not describe, show, or suggest reconfiguration of a crossbar while maintaining operation thereof as claimed. Claim 28, as amended, recites in relevant part that:

> "...the crossbar stages instantiated are partially reconfigured to provide the cross-connectivity responsive to the user programming while maintaining operation of a portion of the crossbar stages."

Claim 31, as amended, recites in relevant part that:

> "...the crossbars instantiated are reconfigurable to provide the cross-connectivity while maintaining operation of circuitry of the crossbars unaffected by a reconfiguration."

Claim 34, as amended, recites in relevant part that:

> "...wherein at least part of the crossbar infrastructure is concurrently operated while another part is being reconfigured to provide the path cross connectivity."

Claim 36, as amended, recites in relevant part that:

> "...an embedded processor operably configured to reconfigure at least one of the first, second, or third stages while maintaining operation of at least a portion of the multi-stage crossbar switch unaffected by reconfiguration."

Claim 38, as amended, recites in relevant part that:

> "...an embedded processor operably configured to reconfigure the crossbar switch while maintaining operation of at least a portion of the crossbar switch unaffected by reconfiguration."

Notably, by providing dynamic reconfiguration of a crossbar switch to provide cross-connectivity, operation of at least a portion of the crossbar switch may be maintained and overlapping connectivity as in Reblewski may be avoided. Moreover, by providing partial reconfiguration, as opposed to complete reconfiguration as in Reblewski with respect to his crossbar network, the time needed to reconfigure for cross-connectivity may be reduced. Additionally, it should be appreciated that by

reconfiguring the crossbar network directly for cross-connectivity, separate reconfigurable stages external to such crossbar network, such as in Reblewski, may be avoided.

Accordingly, it is respectfully submitted that claims 1, 28, 31, 34, 36, and 38, as amended, as well as claim 22 as originally presented, are not described, shown, or suggested by Reblewski, and hence are patentable in plain view of that reference. Claims 2-21, 23-27, 29-30, 32-33, 35, 37, and 39-41, which depend upon an allowable base claim, are likewise allowable.

In the Office Action it was stated that claim 9, 18, and 21 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to include the limitations of the base claim and any intervening claims. However, claims 9, 18, and 21 depend upon allowable base claim 1 as amended. Accordingly, it is respectfully submitted that claims 9, 18, and 21 are in condition for allowance and such allowance is respectfully requested.

CONCLUSION

All claims are in condition for allowance and a Notice of Allowance is respectfully requested. If there are any questions, the applicants' attorney can be reached at Tel: 408-879-6149 (Pacific Standard Time).

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on April 7, 2005.

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